Sheet 1 of 7

Form BTO-1449 Modified				Docket No. CELL-0207	Serial No. 10/081,07	2_
	C	Patent and Publicat ited by Applicant veral sheets if neces		Applicant Stephen Brand et al. RECE DEC 2.7		
U.S. Department of Commerce Patent and Trademark Office			Filing Date February 22, 2002	Group TECH CENTER 1 1623		
		U.	S. PATENT D	OCUMENTS		
Examiner Initial		Document No.	Date	Name	Class	Subclass
RR	1	3,938,367	02/17/76	Fletcher et al.	73	28
-		-				
		FOR	EIGN PATEN	T DOCUMENTS		
Examiner			Translation			
Initial		Document No.	Date	Country	YES	NO
M	2	00/23419 A1	04/27/00	WO		
RR	3	00/32575 A1	06/08/00	WO		
RVZ	4	00/73260 A1	12/07/00	WO		-
RP	5	01/79173 A2	10/25/01	wo		
RIC						
EXAMINER ///Caypur/			DATE CONSIDERE	D 6-17	1-01/	



TECH CENTER 1600/2900

Sheet 2 of 7

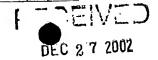
TPE			Doolset No.	Serial No.		
I % \	orm]	PTO-1449 Modified	Docket No. CELL-0207	10/081,072		
	C	Patent and Publications lited by Applicant veral sheets if necessary)	Applicant Stephen Brand et al.			
U		epartment of Commerce and Trademark Office	Filing Date February 22, 2002	Group 1623		
O'	THER	R DOCUMENTS (Including Author	, Title, Date, Pertinent	Pages, Etc.)		
RR	6	Abraham, W.M. et al., "α ₄ -Integrins Responses and Prolonged Airway Hy 1994, 93, 776-787	Mediate Antigen-Induc perresponsiveness in S	ed Late Bronchial heep," J. Clin. Invest.,		
RR	7	Alhaique, F., et al., "Cyclisation of d naphthyridines," Tetrahedron Letters	s, 19 75 , <i>3</i> , 173-174			
RR	8	Alhaique, F. et al., "91/Studies on 2,0 a New Ring-Closure Reaction," Gazz	zetta Chimica Italiana,	1 975, <i>105</i> , 1001-1009		
RR	9	9 Ames, D.E., et al., "Condensation of β-dicarbonyl compounds with halogenopyridinecarb-oxylic acids. A convenient synthesis of some naphthyridine derivatives," J.C.S. Perkin I, 1972, 705-710				
RR	10	Baldwin, J. J. et al., "A Novel Naphthridinone Synthesis via Enamine Cyclization," J. Org. Chem., 1978, 43(25), 4878-4880				
RR	11	Berlin, C. et al., "α4β7 Integrin Mediates Lymphocyte Binding to the Mucosal Vascular Addressin MAdCAM-1," Cell, 1993, 74, 185-195				
RN	12	Binns, R.M. et al., "The Role of E-Selectin in Lymphocyte and Polymorphonuclear Cell Recruitment into Cutaneous Delayed Hypersensitivity Reactions in Sensitized Pigs," J. Immunol., 1996, 157, 4094-409				
RR	13	Bodor, N., "Novel approaches in prodrug design," Alfred Benzon Symposium, 1982, 17, 156-177				
YZR	14	Bordner, J. et al., "1,3-Diamino-6,7-dimethoxyisoquinoline Derivatives as Potential α_1 -Adrenoceptor Antagonist," J. Med Chem., 1988, 31, 1036-1039				
RR	15	Briskin, M.J. et al., "Structural Requ Binding to Its Lymphocyte Receptor	$\alpha_4\beta_7$," J. Immunol., 19	96, <i>156,</i> 719-726		
RR		Brooks, Peter C., et al., "Antiintegrin ανβ3 blocks human breast cancer growth and angiogenesis in human skin," J. Clin. Invest., 1995, 96, 1815-1822				
RP	17	Brun, E. M. et al., "Dienediolates of α,β-Unsaturated Carboxylic Acids in Synthesis: A New Synthetic Method to 2-Pyridones," Synlett, 1999, 7, 1088-1090				
RP	18	Brun, E. M. et al., "A New Synthetic Method to 2-Pyridones," Synthesis, 2000, 2, 273-280				
RP	19	Connecting Segment 1 and Vascular Cell Adhesion Molecule," J. Biol. Chem., 1994, 269(28), 18668-18673				
Mel	20	Deady, L. W. et al., "Ethoxycarbonylation of α-Cyano-o-toluonitrile and Cyclization to Isoquinolines and Pyrimido[4,5-c]isoquinolines," Aust. J. Chem., 1989, 42, 1029-1034				
EXAMINER						

		•				
OLD ACION	Form PTO-1449 Modified		Docket No. CELL-0207	Serial No. 10/081,052		
2 4 2002 W	(Patent and Publications Cited by Applicant veral sheets if necessary)	Applicant Stephen Brand et al.	DEC 2 7 2002		
		epartment of Commerce t and Trademark Office	Filing Date February 22, 2020	TECH CENTER 1600, 2900 Group 1623		
	ОТНЕ	R DOCUMENTS (Including Author	, Title, Date, Pertinent	Pages, Etc.)		
nn	21	Erle, D.J., et al., "Expression and fun $\alpha 4\beta 7$, on human leukocytes," <i>J. Imm</i>				
RP	. 22	Ezcurra, J. E. et al, "Synthesis of o-Q Dimethyl Squarate," <i>Tetrahedron Le</i>	tt, 1993 34(39), 6177-80			
RR	23	Falk, H. et al., "On the Chemistry of Pyrrole Pigments, XCI [1]: Copper Complexes of Pyridinologous Linear Tri- and Tetra-pyrroles as Cyclopropanation Catalysts, Monatshefe Für Chemie, 1994, 125, 325-333				
KK	24	Ferguson, T.A. et al., "Two integrin-binding peptides abrogate T cell-mediated immune responses in vivo," Proc. Natl. Acad. Sci. USA, 1991, 88, 8072-8076				
PR	25	1121				
RR	26	Hammes, H., et al., "Subcutaneous injection of a cyclic peptide antagonist of vitronectin receptor-type integrins inhibits retinal neovascularization," <i>Nature Medicine</i> , 1996, 2, 529-533				
RR	27	Heileman, M. J. et al., "New Metathesis Methodology Leading to Angularly-Fused Polycyclic Quinones and Related Compounds," J. Am. Chem. Soc., 1998, 120, 3801-2				
RP	28	Hergueta, R. A., et al., "Rearrangements of Cyclobutenones. Synthesis of N-Methyl-7,8-dihydrobenzophinanthridine-9,12-diols and Related Compounds," <i>J. Org. Chem.</i> , 1999, 64, 5979-83				
RR	29	Hesterberg, P.E. et al, "Rapid Resolution of Chronic Colitis in the Cotton-top Tamarin With an Antibody to a Gut-Homing Integrin α4β7," Gastroenterol, 1996 111, 1373-80				
1515		Hiebl, J., "New Synthesis of isoquinoline-3-carboxylates," Tetrahedron Letters 40, 1999, 7935-7938				
RIP	31	Hodivala-Dilke, K.M., "β3-integrin-deficient mice are a model for glanzmann thrombasthenia showing placental defects and reduced survival," J. Clin. Invest., 1999, 103(2), 229-238				
VSV	32	Holzmann, B., et al., "Peyer's patch-specific lymphocyte homing receptors consist of a VLA-4-like α chain associated with either of two integrin β chains, one of which is novel," <i>EMBO J.</i> , 1989 , 8(6), 1735-1741				
RP	33	Humphries, M.J. et al., "Mechanisms of VCAM-1 and fibronectin binding to integrin α ₄ β ₁ : implications for integrin function and rational drug design," Ciba Foundation Symposium, 1995, 189, 177-194				
EXAMINE	R	Charpy DATE CONSIDERED 6-17-04				
		1 1/		7		

Sheet 4 of 7

TECH CENTER 1600/2900

OIP		I E OIT O E I I				
E DET. 2	orm	PTO-1449 Modified	Docket No. CELL-0207	Serial No. 10/081,072		
List of Patent and Publications Cited by Applicant (Use several sheets if necessary)			Applicant Stephen Brand et al.			
1		epartment of Commerce t and Trademark Office	Filing Date February 22, 2002	Group 1623		
O	THE	R DOCUMENTS (Including Author,	, Title, Date, Pertinent	Pages, Etc.)		
irr	34	Issekutz, T.B., "Inhibition of Lympho Lymphocyte Migration to Cutaneous Antibody to Rat LFA-1," J. Immunol	Inflammation by TA-3	, a New Monoclonal		
RP	35	Kaiser, E. M. et al., "Facile Synthesis Nov. 1974, 11, 805-6				
RR	36					
RP	37	Kraus, J. L. et al., "Sur La Reactivite Du Squarate De Dimethyle Vis-à-vis De Thiols," <i>Tetrahedron Lett.</i> , 1987 , 28, 1765-8				
RIP	38	airway hyperresponsiveness in dogs," Am. J. Physiol., 1992, 263(6 Pt 1), L723-726				
RP	39	Marlin, S.D. et al., "LFA-1 Immunodeficiency Disease," J. Exp. Med., 1986, 164, 855-867				
RP	40	Mitjans, F., et al., "An anti-av-integrin antibody that blocks integrin function inhibits the development of a human melanoma in nude mice," J. Cell Science, 1995, 108, 2825-2838				
RR	41	Molina, P., et al., "Iminophosphorane-mediated annelation of a pyridine ring into a preformed pyridine one: synthesis of naphthyridine, pyrido [1,2-c] pyrimidine and pyrido [1,2-c] quinazoline derivatives," <i>Tetrahedron</i> , 1992, 48(22), 4601-4616				
RP	42	Molina, P. et al., "Preparation and Thermal Ring-closure of β-Aryl Vinyl Carbodi- imides: Synthesis of Isoquinoline Derivatives," J. Chem. Soc. Perkins Trans., 1990, 1727-1731				
RP	43	Nagarajan A. et al., "Organopalladium mediated synthesis of isocarbostyrils," <i>Indian Journal of Chemistry</i> , Jan. 1989, 28B , 67-68				
RR		Newham, P., et al., "Integrin adhesion receptors: structure, function and implications for biomedicine," <i>Molecular Medicine Today</i> , 1996, 304-313				
RP	45	Nooi and Arens, "Chemistry of Acetylenic Ethers XXXVII. Some new acetylenic ethers," Recl. Trav. Chim. Pays-Bas, 1959, 78, 284-287				
rep	46	Numata, A., et al., "General synthetic method for naphthyridines and their N-oxides containing isoquinolinic nitrogen," Synthesis, 1999, 2, 306-311				
RP	47	Ohno, M. et al., "Synthesis of γ-Acylmethylenetetronates from Squaric Acid," Tetrahedron Lett., 1993, 34, 4807-10				
RP	48	Osborn, L., "Leukoctye Adhesion to Endothelium in Inflammation," Cell, 1990, 62, 3-6				
EXAMINER		1 Ckayne	DATE CONSIDERED	6-17-04		
		1 V		/		



TECH CENTER 1600/2900

Sheet 5 of 7

	Form	PTO-1449 Modified	Docket No. CELL-0207	Serial No. 10/081,072	
1 6	C	Patent and Publications Cited by Applicant veral sheets if necessary)	Applicant Stephen Brand et al.		
RADENEAL		epartment of Commerce and Trademark Office	Filing Date February 22, 2002	Group 1623	
	OTHE	R DOCUMENTS (Including Author	, Title, Date, Pertinent	Pages, Etc.)	
RP	49	Paterson I. et al., "0-Silylated Enolat Carbonyl Compounds by 1,3-Dithier 2829-2832	•	•	
RP	50	Petasis, N. A. et al., "Titanium-Medi Derivatives," <i>Tetrahedron Lett.</i> , 199	-	clobutenedione	
PR	51	Petasis, N. A. et al., "Synthesis of Substituted Benzonorbornadienes from Cyclobutenediones," Synlett, 1996, 155-6			
RR	52	Podolsky, D.K. et al., "Attenuation of Colitis in the Cotton-top Tamarin by Anti-α4 integrin Monoclonal Antibody," J. Clin. Invest., 1993, 92, 372-380			
RR	53	Sakamoto, T., et al., "Condensed heteroaromatic ring systems. III. synthesis of naphthyridine derivatives by cyclization of ethynylpyridinecarboxamides," Chem. Pharm. Bull. 1985, 33(2), 626-633			
RP	54	Sakamoto F. et al., "Studies on Prodrugs. II. Preparation and Characterization of (5-Substituted 2-Oxo-1,3-dioxolen-4-yl)methyl Esters of Ampicillin," Chem. Pharm. Bull., 1984, 32, 2241-2248			
v2P	55	Sheffield, D. J. et al., "Synthesis of Some 4-Pyridylpyruvic Acids as Potential Lactate Dehydrogenase Inhibitors," J.C.S. Perkin I, 1972, 2506-2509			
RR	56	Shroff, H.N., et al., "Small peptide inhibitors of α ₄ β ₇ mediated MadCAM-1 adhesion to lymphocytes," <i>Bioorg. Med. Chem. Letts.</i> , 1996, 6(21), 2495-2500			
KR	57	Singh, G., et al., "Prodrug approach in new drug design and development," J. Sci. Ind. Res., 1996, 55, 497-510			
RIP	58	Sonnenberg, A., "Integrins and their ligands," Curr. Topics Microbiol. Immunol., 1993, 184, 7-35			
15/15	59	Springer, T.A., "Traffic Signals for Lymphocyte Recirculation and Leukocyte Emigration: The Multistep Paradigm," Cell, 1994, 76, 301-314			
VEP	60	Springer, T.A., "Adhesion receptors of the immune system," Nature, 1990, 346, 425-434			
KK	61	Srivatsa, S.S., et al., "Selective \av\B3 integrin blockade potently limits neointimal hyperplasia and lumen stenosis following deep coronary arterial stent injury: evidence for the functional importance of integrin \av\B3 and osteopontin expression during neointima formation," Cariovascular Research, 1997, 36, 408-428			
RR	62	Still, I. W. J., et al. "Convenient Method for the Conversion of Thiols and Disulfides to the Corresponding Chlorides," J. Org. Chem., 1982, 47, 560			
EXAMINE					



Sheet 6 of 7

E 2 4 ans		TECH CENTER 1800/2900				
410 B	Form	PTO-1449 Modified	Docket No. CELL-0207	Serial No. 10/081,072		
DEMARY."	(Patent and Publications Cited by Applicant veral sheets if necessary)	Applicant Stephen Brand et al.			
		epartment of Commerce and Trademark Office	Filing Date February 22, 2002	Group 1623		
	OTHE	R DOCUMENTS (Including Author	, Title, Date, Pertinent	Pages, Etc.)		
RIP	63	Tan R., et al., "Synthesis of 2, 6-naph Tetrahedron Letters, 1965, 31, 2737-		ts derivatives,"		
RT	64	Tovar, J. D. et al., "Pyrylium Salts vi Novel 3-Arylisoquinoline Syntheses,	a Electrophilic Cyclizat "J. Org. Chem., 1999,	<i>64</i> , 6499-6504		
RP	65	Turnbull, P. et al., "Regioselective Syorg. Chem., 1995, 60, 644-9		•		
R17	66	Vanderslice, P. et al., "A Cyclic Hexapeptide is a Potent Antagonist of α4 Integrins," J. Immunol., 1997, 158, 1710-1718				
RP	67	Wasserman, H. H. et al., "Cyclobutenone Derivatives from Ethoxyacetylene," J. Org. Chem, 1973, 38, 1451-1455				
158	68	Wenkert, E. et al., "General Methods of Synthesis of Indole Alkaloids. VI. Syntheses of dl-Corynantheidine and a Camptothecin Model ^{1,2} ," J. Amer. Chem. Soc., 1967, 89(25), 6741-6745				
RP	69	Xu, S. L. et al, "Synthesis of ρ-Chlorophenols (and –naphthols) from the Thermal Rearrangement of 4-Chlorocyclobutenones," J. Org. Chem, 1992, 57, 326-8				
VXP	70	Yamamoto, Y. et al, "2-[1-(Trimethylsilyl)alkylidene]-4-cyclopentene-1,3-dione from Lewis Acid-Catalyzed Reaction of Cyclobutenedione Monoacetal with Alkynylsilane: Novel Cationic 1,2-Silyl Migrative Ring Opening and Subsequent 5-Exo-Trig Ring Closure," J. Org. Chem, 1997, 62, 1292-8				
RR	71	Yang, X., "A predominant role of integrin $\alpha 4$ in the spontaneous development of autoimmune diabetes in nonobese diabetic mice," <i>Proc. Natl. Acad. Sci. USA</i> , 1994, 91, 12604-12608				
RR	72	Yednock, T.A., "Prevention of experimental autoimmune encephalomyelitis by antibodies against α4β1 integrin," <i>Nature</i> , 1992 , <i>356</i> , 63-66				
RR	73	Yerxa, B. R. et al, "Synthesis of Indolizine-5-8-diones and [3.2.2] Cyclazines," Tetrahedron Lett., 1992, 33, 7811-14				
RP	74	Yerxa, B. R. et al. "Synthesis of (±)-Septicine," Tetrahedron, 1994, 50, 6173-80				
RR	75	Zhang, D. et al., "A Versatile Synthesis of 3-Substituted Indolines and Indoles," J. Org. Chem., 1996, 61, 2594-5				
EXAMINE						
		, , , , , , , , , , , , , , , , , , , ,		∕© 2002 WW		

ECEIVED

DEC 2 7 2002

Sheet 7 of 7

TECH CENTER 1699/2990

2 4 2002	Form	PTO-1449 Modified	Docket No. CELL-0207	Serial No. 10/081,072			
BADEMEDM	List of Patent and Publications Cited by Applicant (Use several sheets if necessary)		Applicant Stephen Brand et al.				
	U.S. Department of Commerce Patent and Trademark Office		Filing Date February 22, 2002	Group 1623			
	OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)						
* RK	* 76 Bundgaard, H., Design of Prodrugs, 1985, Elsevier, Amsterdam						
* PR	77	Comprehensive Organic Functional Group Transformations, Ed. Katritzky et al, Volumes 1-7, 1995 (Pergamon)					
* nn	78	Comprehensive Heterocyclic Chemistry, Ed. Katritzky et al, Volumes 1-8, 1984 and Volumes 1-11, 1994 (Pergamon)					
* PR	79	Comprehensive Organic Synthesis, Ed. Trost and Flemming, Volumes 1-9, (Pergamon, 1991)					
* RN	80	Encyclopedia of Reagents for Organic Synthesis, Ed. Paquette, Volumes 1-8 (John Wiley and Sons, 1995)					
* 151)	81	Fieser and Fieser's Reagents for Organic Synthesis, Volumes 1-19 (John Wiley and Sons, 1999)					
* 1217	82	Green, T. W. in "Protective Groups in Organic Synthesis", John Wiley and Sons, 1999					
* RV	83	Larock's Comprehensive Organic Transformations (VCH Publishers Inc., 1989)					
* 1217	84	March's Advanced Organic Chemistry (John Wiley and Sons, 1992)					
* RP	85	Rodd's Chemistry of Carbon Compounds, Volumes 1-15 and Supplementals (Elsevier Science Publishers, 1989)					
EXAMINER Course DATE CONSIDERED 6-(7-0")							

^{*}A copy of this reference will not be forwarded to the U.S. Patent and Trademark Office since it is believed to be too voluminous and may be obtainable by the Examiner.